REGION 6
1445 ROSS AVENUE
DALLAS, TEXAS 75202-2733

NPDES Permit No TX0007587

AUTHORIZATION TO DISCHARGE UNDER THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

In compliance with the provisions of the Clean Water Act, as amended, (33 U.S.C. 1251 et. seq; the "Act"),

Chevron Phillips Chemical
Clemens Terminal
P.O. Box 1000
Sweeney, Texas 77480

is authorized to discharge from a facility located at County Road 314, Brazoria County, TX,

from Outfall 001 located at Latitude 32º 45' 59" North, Longitude 100º 56' 57" West,

to the San Bernard River Tidal in Waterbody Segment Code No. 1301 of the Brazos Colorado Coastal Basin,

in accordance with this cover page and the effluent limitations, monitoring requirements, and other conditions set forth in Part I, Part II and Part III hereof.

This permit shall become effective on

This permit and the authorization to discharge shall expire at midnight,

Issued on

Miguel I. Flores
Director
Water Quality Protection Division (6WQ)

Prepared by

Laurence E. Giglio
Environmental Engineer
Permits & Technical Section (6WQ-PP)

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PART I – REQUIREMENTS FOR NPDES PERMITS

SECTION A. LIMITATIONS AND MONITORING REQUIREMENTS

1. FINAL Effluent Limits – Intermittent Flow

During the period beginning the effective date of the permit and lasting through the expiration date of the permit (unless otherwise noted), the permittee is authorized to discharge brine production water to the San Bernard River, of the Brazos Colorado Coastal Basin, in Water Body Segment Code No. 1301. Such discharges shall be limited and monitored by the permittee as specified below:

EFFLUENT CHARACTERISTICS		DISCHARGE LIMITATIONS Standard Units		MONITORING REQUIREMENTS	
POLLUTANT	STORET CODE	MINIMUM	MAXIMUM	MEASUREMENT FREQUENCY	SAMPLE TYPE
PH	00400	6.0	9.0	Once/Week (*1)	Grab

EFFLUENT CHARACTERISTICS		DISCHARGE LIMITATIONS lbs/day, unless noted		DISCHARGE LIMITATIONS mg/l, unless noted		MONITORING REQUIREMENTS	
POLLUTANT	STORET CODE	MON AVG	DAY MAX	MON AVG	DAY MAX	MEASUREMENT FREQUENCY	SAMPLE TYPE
Flow	50050	Report MGD	Report MGD	N/A	N/A	Once/Day (*1)	Measure
Oil and Grease	00556	N/A	N/A	10	15	Once/Week (*1)	Grab
Total Organic Carbon	00680	N/A	N/A	20	30	Once/Week (*1)	Grab
Stream Flow Rate (*2)	00058	Report MGD	Report MGD	N/A	N/A	Once/Day (*3)	Measure
Discharge Percent of Stream Flow (*4)	01352	N/A	N/A	5%	5%	Once/Day (*3)	Calculate

EFFLUENT CHARACTERISTICS	DISCHARGE MONITORING		MONITORING REQUIREMENTS	
WHOLE EFFLUENT LETHALITY (7-Day Static Renewal) (*5, 6)	MONTHLY AVG MINIMUM	7-DAY MINIMUM	MEASUREMENT FREQUENCY	SAMPLE TYPE
Menidia beryllina	Report	Report	Once/Quarter (*4, 6)	24-Hr Composite
Mysidopsis bahia	Report	Report	Once/Quarter (*4, 6)	24-Hr Composite

Footnotes:

*1 When Discharging.

*2 Stream flow shall be the arithmetic 24-hour flow rate measured in MGD based on the upstream flow station.

*3 Stream flow shall be measured every day, even if there is no (zero) discharge from Outfall 001.

*4 Discharge Percent of Stream Flow is the effluent discharge flow rate from Outfall 001 divided by the stream flow rate measured during the previous 24 hour period.

*5 Monitoring and reporting requirements begin on the effective date of this permit. See Part II.C, Whole Effluent Toxicity Testing Requirements for additional WET monitoring and reporting conditions.

*6 Monthly testing is required for ALL months, when the ratio of ANY single day's discharge rate to stream flow rate is greater than 4%. See additional requirements in Part II.D, Monthly Whole Effluent Toxicity Testing Requirements of the permit.

FLOATING SOLIDS, VISIBLE FOAM AND/OR OILS

Surface waters shall be maintained so that oil, grease, or related residue will not produce a visible film or globules of grease on the surface or coat the banks or bottoms of the watercourse; or cause toxicity to man, aquatic life, or terrestrial life.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the discharge from the final treatment unit prior to the receiving stream.

B. SCHEDULE OF COMPLIANCE

The permittee shall achieve compliance with the effluent limitations specified for discharges in accordance with the following schedule:

NONE

C. MONITORING AND REPORTING (MAJOR DISCHARGERS)

Monitoring information shall be on Discharge Monitoring Report Form(s) EPA 3320-1 as specified in Part III.D.4 of this permit and shall be submitted monthly.

1. Reporting periods shall end on the last day of the month.

2. The permittee is required to submit regular monthly reports as described above postmarked no later than the 25th day of the month following each reporting period.

3. NO DISCHARGE REPORTING

   If there is no discharge from any outfall during the sampling month, place an "X" in the NO DISCHARGE box located in the upper right corner of the Discharge Monitoring Report.

PART II - OTHER CONDITIONS

A. MINIMUM QUANTIFICATION LEVEL (MQL)

If any individual analytical test result is less than the minimum quantification level listed below, a value of zero (0) may be used for that individual result for the Discharge Monitoring Report (DMR) calculations and reporting requirements.

Pollutant	MQL (µg/l)
Aluminum	30
Barium	10
Chlorine (Total Residual)	100
Bis(Chloromethyl) Ether	--
Carbaryl	5
Chloropyrifos	0.05
Cresols	10
2,4 D	10
Danitol	--
Demeton	0.20
1,2 Dibromoethane	2
Dicofol	20
Fluoride	500
Guthion	0.1
Hexachlorophene	10
Malathion	0.1
Methoxychlor	2.0
Methyl Ethyl Ketone	50
Mirex	0.2
Nitrate N	1000
n Nitrosodiethylamine	20
n Nitroso di n Butylamine	20
Parathion	0.1
Pentachlorobenzene	20
Pyridine	20
1,2,4,5 Tetrachlorobenzene	20
2,4,5 TP (Silvex)	2.0
Tributyltin	0.010
2,4,5 Trichlorophenol	50
Total Trihalomethanes	40
Antimony (Total)	60
Arsenic (Total)	10
Beryllium (Total)	5

Cadmium (Total)	1
Chromium (Total)	10
Chromium (3+)	10
Chromium (6+)	10
Copper (Total)	10
Lead (Total)	5
Mercury (Total)	0.2
Nickel (Total)	10
Selenium (Total)	10
Silver (Total)	2
Thallium (Total)	10
Zinc (Total)	5
Cyanide (Total)	20
Cyanide (Amenable)	20
2,3,7,8-TCDD	0.00001
Acrolein	50
Acrylonitrile	50
Benzene	10
Bromoform	10
Carbon Tetrachloride	10
Chlorobenzene	10
Chlorodibromomethane	10
Chloroethane	50
2-Chloroethyl Vinyl Ether	10
Chloroform	10
Dichlorobromomethane	10
1,1-Dichloroethane	10
1,2-Dichloroethane	10
1,1-Dichloroethylene	10
1,2-Dichloropropane	10
1,3-Dichloropropylene	10
Ethyl benzene	10
Methyl Bromide [Bromomethane]	50
Methyl Chloride [Chloromethane]	50
Methylene Chloride	20
1,1,2,2-Tetrachloroethane	10
Tetrachloroethylene	10
Toluene	10
1,2-trans-Dichloroethylene	10
1,1,1-Trichloroethane	10
1,1,2-Trichloroethane	10
Trichloroethylene	10

Vinyl Chloride	10
2-Chlorophenol	10
2,4-Dichlorophenol	10
2,4-Dimethylphenol	10
4,6-Dinitro-o-Cresol [2-Methyl-4,6-Dinitrophenol]	50
2,4-Dinitrophenol	50
2-Nitrophenol	20
4-Nitrophenol	50
p-Chloro-m-Cresol [4-Chloro-3-Methylphenol]	10
Pentachlorophenol	50
Phenol	10
2,4,6-Trichlorophenol	10
Acenaphthene	10
Acenaphthylene	10
Anthracene	10
Benzidine	50
Benzo(a)anthracene	10
Benzo(a)pyrene	10
3,4-Benzofluoranthene	10
Benzo(ghi)perylene	20
Benzo(k)fluoranthene	10
Bis(2-chloroethoxy) Methane	10
Bis(2-chloroethyl) Ether	10
Bis(2-chloroisopropyl) Ether	10
Bis(2-ethylhexyl) Phthalate	10
4-Bromophenyl Phenyl Ether	10
Butyl Benzyl Phthalate	10
2-Chloronapthalene	10
4-Chlorophenyl Phenyl Ether	10
Chrysene	10
Dibenzo(a,h)anthracene	20
1,2-Dichlorobenzene	10
1,3-Dichlorobenzene	10
1,4-Dichlorobenzene	10
3,3'-Dichlorobenzidine	50
Diethyl Phthalate	10
Dimethyl Phthalate	10
Di-n-Butyl Phthalate	10
2,4-Dinitrotoluene	10
2,6-Dinitrotoluene	10
Di-n-octyl Phthalate	10
1,2-Diphenylhydrazine	20

Fluoranthene	10
Fluorene	10
Hexachlorobenzene	10
Hexachlorobutadiene	10
Hexachlorocyclopentadiene	10
Hexachloroethane	20
Indeno (1,2,3-cd)pyrene [2,3-o-Phenylene Pyrene]	20
Isophorone	10
Naphthalene	10
Nitrobenzene	10
N-Nitrosodimethylamine	50
N-Nitrosodi-n-Propylamine	20
N-Nitrosodiphenylamine	20
Phenanthrene	10
Pyrene	10
1,2,4-Trichlorobenzene	10
Aldrin	0.05
Alpha-BHC	0.05
Beta-BHC	0.05
Gamma-BHC [Lindane]	0.05
Delta-BHC	0.05
Chlordane	0.15
4,4'-DDT	0.1
4,4'-DDE [p,p-DDX]	0.1
4,4'-DDD [p,p-TDE]	0.1
Dieldrin	0.1
Alpha-Endosulfan	0.1
Beta-Endosulfan	0.1
Endosulfan Sulfate	0.1
Endrin	0.1
Endrin Aldehyde	0.1
Heptachlor	0.05
Heptachlor Epoxide [BHC-Hexachlorocyclohexane]	1.0
PCB-1242	1.0
PCB-1254	1.0
PCB-1221	1.0
PCB-1232	1.0
PCB-1248	1.0
PCB-1260	1.0
PCB-1016	1.0
Toxaphene	5.0

The permittee may develop an effluent specific method detection limit (MDL) in accordance with Appendix B to 40CFR136. For any pollutant for which the permittee determines an effluent specific MDL, the permittee shall send to the EPA Region 6 NPDES Permits Branch (6WQ-P) a report containing QA/QC documentation, analytical results, and calculations necessary to demonstrate that the effluent specific MDL was correctly calculated. An effluent specific minimum quantification level (MQL) shall be determined in accordance with the following calculation:

MQL = 3.3 x MDL

Upon written approval by the EPA Region 6 NPDES Permits Branch (6WQ-P), the effluent specific MQL may be utilized by the permittee for all future Discharge Monitoring Report (DMR) calculations and reporting requirements.

B. COMPOSITE SAMPLING (24-HOUR)

1. STANDARD PROVISIONS

Unless otherwise specified in this permit, the term "24-hour composite sample" means a sample consisting of a minimum of three (3) aliquots of effluent collected at regular intervals over a normal 24-hour operating period and combined in proportion to flow or a sample continuously collected in proportion to flow over a normal 24-hour operating period.

2. VOLATILE COMPOUNDS

For the "24-hour composite" sampling of volatile compounds using EPA Methods 601, 602, 603, 624, 1624, or any other 40CFR136 method approved after the effective date of the permit, the permittee shall manually collect four (4) aliquots (grab samples) in clean zero head-space containers at regular intervals during the actual hours of discharge during the 24 hour sampling period using sample collection, preservation, and handling techniques specified in the test method. These aliquots must be combined in the laboratory to represent the composite sample of the discharge. One of the following alternative methods shall be used to composite these aliquots.

a. Each aliquot is poured into a syringe. The plunger is added, and the volume in the syringe is adjusted to 1 1/4 ml. Each aliquot (1 1/4 ml.) is injected into the purging chamber of the purge and trap system. After four (4) injections (total 5 ml.), the chamber is purged. Only one analysis or run is required since the aliquots are combined prior to analysis.

b. Chill the four (4) aliquots to 4 Degrees Centigrade. These aliquots must be of equal volume. Carefully pour the contents of each of the four aliquots into a 250 500 ml.

flask which is chilled in a wet ice bath. Stir the mixture gently with a clean glass rod while in the ice bath. Carefully fill two (2) or more clean 40 ml. zero head space vials from the flask and dispose of the remainder of the mixture. Analyze one of the aliquots to determine the concentration of the composite sample. The remaining aliquot(s) are replicate composite samples that can be analyzed if desired or necessary.

c. Alternative sample compositing methods may be used following written approval by EPA Region 6.

The individual samples resulting from application of these compositing methods shall be analyzed following the procedures specified for the selected test method. The resulting analysis shall be reported as the daily composite concentration.

As an option to the above compositing methods, the permittee may manually collect four (4) aliquots (grab samples) in clean zero head-space containers at regular intervals during the actual hours of discharge during the 24 hour sampling period using sample collection, preservation, and handling techniques specified in the test method. A separate analysis shall be conducted for each discrete grab sample following the approved test methods. The determination of daily composite concentration shall be the arithmetic average (weighted by flow) of all grab samples collected during the 24 hour sampling period.

C. WHOLE EFFLUENT TOXICITY TESTING (7-DAY CHRONIC NOEC MARINE)

It is unlawful and a violation of this permit for a permittee or his designated agent, to manipulate test samples in any manner, to delay sample shipment, or to terminate or to cause to terminate a toxicity test. All WET tests performed under this permit must be performed to adhere with the conditions established in this permit and the referenced WET testing method manual, using the specified number of effluent dilutions, replicates and organisms per replicate. Once initiated, all toxicity tests must be completed unless specific authority has been granted by EPA Region 6. Unless specifically approved in writing by EPA Region 6 the permitting authority, any test that is not performed following the conditions described herein will be rejected and may result in other actions.

1. SCOPE AND METHODOLOGY

   a. The permittee shall test the effluent for toxicity in accordance with the provisions in this section.

      APPLICABLE TO FINAL OUTFALL(S): 001

      REPORTED ON DMR AS FINAL OUTFALL: TXS

CRITICAL DILUTION (%):	5
EFFLUENT DILUTION SERIES (%):	2%, 4%, 5%, 7%, and 9%
COMPOSITE SAMPLE TYPE:	Defined at PART I
TEST SPECIES/METHODS:	40 CFR Part 136

Mysidopsis bahia (Mysid shrimp) chronic static renewal 7 day survival and growth test using Method 1007.0, EPA-821-R-02-014, or the most recent update thereof.

Menidia beryllina (Inland Silverside minnow) chronic static renewal 7 day larval survival and growth test, Method 1006.0, EPA-821-R-02-014, or the most recent update thereof. A minimum of five (5) replicates with eight (8) organisms per replicate must be used in the control and in each effluent dilution of this test.

b. The NOEC (No Observed Effect Concentration) is defined as the greatest effluent dilution at and below which toxicity that is statistically different from the control (0% effluent) at the 95% confidence level does not occur.

c. This permit may be reopened to require whole effluent toxicity limits, chemical specific effluent limits, additional testing, and/or other appropriate actions to address toxicity.

d. Test failure is defined as a demonstration of statistically significant sub-lethal or lethal effects to a test species at or below the effluent critical dilution.

e. Upon the demonstration of significant lethal or sub-lethal effects at or below the critical dilution, in any test, this permit will be modified to include WET limits for the affected species. The facility shall notify EPA, in writing, within ten (10) days of any test failure.

2. SUB-LETHAL EFFECTS

The requirements of this subsection apply only when a toxicity test demonstrates significant sub-lethal effects at or below the critical dilution.

a. Part I Testing Frequency Other Than Monthly

i. The permittee shall conduct a total of three (3) additional tests for any species that demonstrates significant sub-lethal effects at or below the critical dilution. The additional tests shall be conducted at approximately 30-day intervals during the

next three consecutive months. If testing on a quarterly basis, the permittee may substitute one of the additional tests in lieu of one routine toxicity test. A full report shall be prepared for each test required by this section in accordance with procedures outlined in Item 4 of this section and submitted with the period discharge monitoring report (DMR) to the permitting authority for review.

ii. If any two of the three additional tests demonstrates significant sub-lethal effects at 75% effluent or lower, the permittee shall initiate the Sub-Lethal Toxicity Reduction Evaluation (TRESL) requirements as specified in Item 5 of this section. The permittee shall notify EPA in writing within 5 days of the failure of any retest, and the Sub-Lethal Effects TRE initiation date will be the test completion date of the first failed retest. A TRE may be also be required for failure to perform the required retests.

iv. The provisions of Item 2.a.i. are suspended upon submittal of the TRE Action Plan.

b. Part I Testing Frequency of Monthly

The permittee shall initiate the Toxicity Reduction Evaluation (TRE) requirements as specified in Item 5 of this section when any two of three consecutive monthly toxicity tests exhibit significant lethal effects at or below the critical dilution. A TRE may also be required due to a demonstration of intermittent and/or sub-lethal effects at or below the critical dilution, or for failure to perform the required retests.

3. REQUIRED TOXICITY TESTING CONDITIONS

a. Test Acceptance

The permittee shall repeat a test, including the control and all effluent dilutions, if the procedures and quality assurance requirements defined in the test methods or in this permit are not satisfied, including the following additional criteria:

i. The toxicity test control (0% effluent) must have survival equal to or greater than 80%.

ii. The mean dry weight of surviving Mysid shrimp at the end of the 7 days in the control (0% effluent) must be 0.20 mg per Mysid or greater. Should the mean dry weight in the control be less than 0.20 mg per Mysid, the toxicity test, including the control and all effluent dilutions shall be repeated.

iii. The mean dry weight of surviving unpreserved Inland Silverside minnow larvae at the end of the 7 days in the control (0% effluent) must be 0.50 mg per larva or greater. The mean dry weight of surviving preserved Inland Silverside minnow larvae at the end of the 7 days in the control (0% effluent) must be 0.43 mg per larva or greater.

iv. The percent coefficient of variation between replicates shall be 40% or less in the control (0% effluent) for: the growth and survival endpoints in the Mysid shrimp test; and the growth and survival endpoints of the Inland Silverside minnow test.

v. The percent coefficient of variation between replicates shall be 40% or less in the critical dilution, unless significant lethal or nonlethal effects are exhibited for: the growth and survival endpoints in the Mysid shrimp test; and the growth and survival endpoints of the Inland Silverside minnow test.

vi A Percent Minimum Significant Difference (PMSD) range of 11 - 37 for Mysidopsis bahia growth;

vii. A PMSD range of 11 - 28 for Silverside minnow growth.

Test failure may not be construed or reported as invalid due to a coefficient of variation value of greater than 40%. A repeat test shall be conducted within the required reporting period of any test determined to be invalid.

b. Statistical Interpretation

For the Mysid shrimp and the Inland Silverside minnow larval survival and growth test, the statistical analyses used to determine if there is a significant difference between the control and the critical dilution shall be in accordance with the methods for determining the No Observed Effect Concentration (NOEC) as described in EPA-821-R-02-014 or the most recent update thereof.

If the conditions of Test Acceptability are met in Item 3.a above and the percent survival of the test organism is equal to or greater than 80% in the critical dilution concentration and all lower dilution concentrations, the test shall be considered to be a passing test, and the permittee shall report an NOEC of not less than the critical dilution for the DMR reporting requirements found in Item 4 below.

c. Dilution Water

i. Dilution water used in the toxicity tests will be receiving water collected as close to the point of discharge as possible but unaffected by the discharge. The

permittee shall substitute synthetic dilution water of similar pH, hardness, and salinity to the closest downstream perennial water for;

(A) toxicity tests conducted on effluent discharges to receiving water classified as intermittent streams; and

(B) toxicity tests conducted on effluent discharges where no receiving water is available due to zero flow conditions.

ii. If the receiving water is unsatisfactory as a result of instream toxicity (fails to fulfill the test acceptance criteria of Item 3.a), the permittee may substitute synthetic dilution water for the receiving water in all subsequent tests provided the unacceptable receiving water test met the following stipulations:

(A) a synthetic dilution water control which fulfills the test acceptance requirements of Item 3.a was run concurrently with the receiving water control;

(B) the test indicating receiving water toxicity has been carried out to completion (i.e., 7 days);

(C) the permittee includes all test results indicating receiving water toxicity with the full report and information required by Item 4 below; and

(D) the synthetic dilution water shall have a pH, hardness, and salinity similar to that of the receiving water or closest downstream perennial water not adversely affected by the discharge, provided the magnitude of these parameters will not cause toxicity in the synthetic dilution water.

d. Samples and Composites

i. The permittee shall collect a minimum of three flow weighted composite samples from the outfall(s) listed at Item 1.a above.

ii. The permittee shall collect second and third composite samples for use during 24 hour renewals of each dilution concentration for each test. The permittee must collect the composite samples such that the effluent samples are representative of any periodic episode of chlorination, biocide usage or other potentially toxic substance discharged on an intermittent basis.

iii. The permittee must collect the composite samples so that the maximum holding time for any effluent sample shall not exceed 72 hours. The permittee must have

initiated the toxicity test within 36 hours after the collection of the last portion of the first composite sample. Samples shall be chilled to 4 degrees Centigrade during collection, shipping, and/or storage.

iv. If the flow from the outfall(s) being tested ceases during the collection of effluent samples, the requirements for the minimum number of effluent samples, the minimum number of effluent portions and the sample holding time are waived during that sampling period. However, the permittee must collect an effluent composite sample volume during the period of discharge that is sufficient to complete the required toxicity tests with daily renewal of effluent. When possible, the effluent samples used for the toxicity tests shall be collected on separate days if the discharge occurs over multiple days. The effluent composite sample collection duration and the static renewal protocol associated with the abbreviated sample collection must be documented in the full report required in Item 4 of this section.

v. MULTIPLE OUTFALLS: If the provisions of this section are applicable to multiple outfalls, the permittee shall combine the composite effluent samples in proportion to the average flow from the outfalls listed in Item 1.a above for the day the sample was collected. The permittee shall perform the toxicity test on the flow weighted composite of the outfall samples.

4. REPORTING

a. The permittee shall prepare a full report of the results of all tests conducted pursuant to this section in accordance with the Report Preparation Section of EPA-821-R-02-014 , or the most current publication, for every valid or invalid toxicity test initiated whether carried to completion or not. The permittee shall retain each full report pursuant to the provisions of PART III.C.3 of this permit. The permittee shall submit full reports upon the specific request of the Agency. For any test which fails, is considered invalid or which is terminated early for any reason, the full report must be submitted for agency review.

b. A valid test for each species must be reported on the DMR during each reporting period specified in PART I of this permit unless the permittee is performing a TRE which may increase the frequency of testing and reporting. Only ONE set of biomonitoring data for each species is to be recorded on the DMR for each reporting period. The data submitted should reflect the LOWEST survival lethal and sub-lethal results for each species during the reporting period. All invalid tests, repeat tests (for invalid tests), and retests (for tests previously failed) performed during the reporting period must be attached to the DMR for EPA review.

c. The permittee shall submit the results of each valid toxicity test on the subsequent monthly DMR for that reporting period in accordance with PART III.D.4 of this permit, as follows below. Submit retest information clearly marked as such with the following month's DMR. Only results of valid tests are to be reported on the DMR.

i. Menidia beryllina (Inland Silverside minnow)

(A) If the No Observed Effect Concentration (NOEC) for survival is less than the critical dilution, enter a "1"; otherwise, enter a "0". Parameter No. TLP6B.

(B) Report the NOEC value for survival, Parameter No. TOP6B.

(C) Report the Lowest Observed Effect Concentration (LOEC) value for survival, Parameter No. TXP6B

(D) Report the NOEC value for growth, Parameter No. TPP6B

(E) Report the LOEC value for growth, Parameter No. TYP6B

(F) If the No Observed Effect Concentration (NOEC) for growth is less than the critical dilution, enter a "1"; otherwise, enter a "0" for Parameter No. TGP6B

(G) Report the highest (critical dilution or control) Coefficient of Variation, Parameter No. TQP6B.

ii. Mysidopsis bahia (Mysid shrimp)

(A) If the NOEC for survival is less than the critical dilution, enter a "1"; otherwise, enter a "0". Parameter No. TLP3E.

(B) Report the NOEC value for survival, Parameter No. TOP3E.

(C) Report the LOEC value for survival, Parameter No. TXP3E

(D) Report the NOEC value for growth, Parameter No. TPP3E

(E) Report the LOEC value for growth, Parameter No. TYP3E

(F) If the No Observed Effect Concentration (NOEC) for growth is less than the critical dilution, enter a "1"; otherwise, enter a "0" for Parameter No. TGP3E.

(G) Report the highest (critical dilution or control) Coefficient of Variation, Parameter No. TQP3E.

5. TOXICITY REDUCTION EVALUATIONS (TRE's)

TRE's for lethal and sub-lethal effects are performed in a very similar manner. EPA Region 6 is currently addressing TRE's as follows: a sub-lethal TRE (TRESL) is triggered based on three sub-lethal test failures while a lethal effects TRE (TREL) is triggered based on only two test failures for lethality. In addition, EPA Region 6 will consider the magnitude of toxicity and use flexibility when considering a TRESL where there are no effects at effluent dilutions of less than 76% effluent.

a. Within ninety (90) days of confirming sub-lethal toxicity, the permittee shall submit a Toxicity Reduction Evaluation (TRE) Action Plan and Schedule for conducting a TRE. The TRE Action Plan shall specify the approach and methodology to be used in performing the TRE. A Toxicity Reduction Evaluation is an investigation intended to determine those actions necessary to achieve compliance with water quality-based effluent limits by reducing an effluent's toxicity to an acceptable level. A TRE is defined as a step-wise process which combines toxicity testing and analyses of the physical and chemical characteristics of a toxic effluent to identify the constituents causing effluent toxicity and/or treatment methods which will reduce the effluent toxicity. The goal of the TRE is to maximally reduce the toxic effects of effluent at the critical dilution and include the following:

i. Specific Activities. The plan shall detail the specific approach the permittee intends to utilize in conducting the TRE. The approach may include toxicity characterizations, identifications and confirmation activities, source evaluation, treatability studies, or alternative approaches. When the permittee conducts Toxicity Characterization Procedures the permittee shall perform multiple characterizations and follow the procedures specified in the documents "Methods for Aquatic Toxicity Identification Evaluations: Phase I Toxicity Characterization Procedures" (EPA-600/6-91/003) and "Toxicity Identification Evaluation: Characterization of Chronically Toxic Effluents, Phase I" (EPA-600/6-91/005F), or alternate procedures. When the permittee conducts Toxicity Identification Evaluations and Confirmations, the permittee shall perform multiple identifications and follow the methods specified in the documents "Methods for Aquatic Toxicity Identification Evaluations, Phase II Toxicity Identification Procedures for Samples Exhibiting Acute and Chronic Toxicity" (EPA/60¬0/R-92/080) and "Methods for Aquatic Toxicity Identification Evaluations, Phase III Toxicity Confirmation Procedures for Samples Exhibiting Acute and Chronic Toxicity" (EPA/600¬/R-92/081), as appropriate.

The documents referenced above may be obtained through the National Technical Information Service (NTIS) by phone at (703) 487-4650, or by writing:

U.S. Department of Commerce
National Technical Information Service
5285 Port Royal Road
Springfield, VA 22161

ii. Sampling Plan (e.g., locations, methods, holding times, chain of custody, preservation, etc.). The effluent sample volume collected for all tests shall be adequate to perform the toxicity test, toxicity characterization, identification and confirmation procedures, and conduct chemical specific analyses when a probable toxicant has been identified;

Where the permittee has identified or suspects specific pollutant(s) and/or source(s) of effluent toxicity, the permittee shall conduct, concurrent with toxicity testing, chemical specific analyses for the identified and/or suspected pollutant(s) and/or source(s) of effluent toxicity. Where lethality was demonstrated within 48 hours of test initiation, each composite sample shall be analyzed independently. Otherwise the permittee may substitute a composite sample, comprised of equal portions of the individual composite samples, for the chemical specific analysis;

iii. Quality Assurance Plan (e.g., QA/QC implementation, corrective actions, etc.); and

iv. Project Organization (e.g., project staff, project manager, consulting services, etc.).

b. The permittee shall initiate the TRE Action Plan within thirty (30) days of plan and schedule submittal. The permittee shall assume all risks for failure to achieve the required toxicity reduction.

c. The permittee shall submit a quarterly TRE Activities Report, with the Discharge Monitoring Report in the months of January, April, July and October, containing information on toxicity reduction evaluation activities including:

i. any data and/or substantiating documentation which identifies the pollutant(s) and¬/or source(s) of effluent toxicity;

ii. any studies/evaluations and results on the treatability of the facility's effluent toxicity; and

iii. any data which identifies effluent toxicity control mechanisms that will reduce effluent toxicity to the level necessary to meet no significant lethality at the critical dilution.

A copy of the TRE Activities Report shall also be submitted to the state agency.

d. The permittee shall submit a Final Report on Toxicity Reduction Evaluation Activities no later than twenty-eight (28) months from confirming lethality in the retests, which provides information pertaining to the specific control mechanism, selected that will, when implemented, result in reduction of effluent toxicity to no significant lethality at the critical dilution. The report will also provide a specific corrective action schedule for implementing the selected control mechanism.

A copy of the Final Report on Toxicity Reduction Evaluation Activities shall also be submitted to the state agency.

Quarterly testing during the TRE is a minimum monitoring requirement. EPA recommends that permittees required to perform a TRE not rely on quarterly testing alone to ensure success in the TRE, and that additional screening tests be performed to capture toxic samples for identification of toxicants. Failure to identify the specific chemical compound causing toxicity test failure will normally result in a permit limit for whole effluent toxicity limits per federal regulations at 40 CFR 122.44(d)(1)(v).

D. MONTHLY WHOLE EFFLUENT TOXICITY TESTING REQUIREMENTS

When the discharge rate from Outfall 001 is greater than 4% of the flow of the San Bernard River for any day, the facility will perform a whole effluent toxicity test for that month. The sampling for the test shall be initiated within 24-hours of the day that the 4% discharge percent occurred. EPA acknowledges that this sampling initiating requirement may push the actual sampling into the next month, or even into the next quarterly reporting period, and in that event, report the sample results no later than the next month's DMR report. Make note on the DMR form however the month that the 4% exceedance occurred. Additionally, in the event that during ANY quarterly reporting period such a monthly test has occurred, that test may be used to satisfy the required quarterly test. However, if the quarterly test has been performed, and an exceedance of the 4% rate occurs, then an additional test shall be required for each and any month that the 4% is exceeded. Once a 4% dilution test has been performed, any additional discharges during that SAME month that exceeds the 4% threshold do not need additional testing. A single monthly test is all that the permit requires, except in those occurrences when a test for the quarterly requirement has been performed, and then later in the same month a 4% test is required.